

ENVIRONMENT: WILL FLORIDA TRY TO TAME COASTAL BUILDING BOOM?

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Body

A dramatic rise in sea levels predicted by researchers at a major U.S. government agency has renewed concerns among scientists and community planners about the fate of Florida's coastlines.

According to "The Probability of Sea Level Rise," a study written by two U.S. Environmental Protection Agency (EPA) scientists, sea level rises for the southwest Florida area could range anywhere from 7.1 to 26.9 centimeters by 2025.

The consequences could include higher hurricane storm surges and saltwater intrusion into freshwater catches, and, in the longer term, the disappearance of existing coastal areas and wetlands.

Although the EPA report came out in 1995, the data sets used to create the models are still valid, Daniel L. Trescott, the principal planner for the Southwest Florida Regional Planning Council, told IPS.

The report became a subject of debate last week when it was widely released for the first time by Public Employees for Environmental Responsibility (PEER), a national alliance of local, state and federal environmental resource professionals.

"We want to get people to start talking about how their Florida state government will deal with this," said Trescott, whose main concern is how to mitigate the potential impacts.

He works with one of 11 regional planning councils whose public mandate is to serve as a bridge between communities and their state and local governments.

"There is no question that growth management in Florida can be controlled by a few people, such as the governor and some secretaries of state agencies. But it all comes back to the fact that people want to build their homes near the water," Trescott said.

The boom in construction of homes and businesses along Florida's picturesque coasts has had other negative effects on the state's ecosystems, he said, adding that he does not believe that the state or federal governments are incorporating the data on sea levels into their long-range development plans.

In late June, Trescott presented a report based on the EPA study and data gathered over the last century by tide gauges in Key West and other sites at the Southwest Florida Symposium, a meeting of scientists to discuss issues affecting the local environment that was held in Fort Myers.

According to Trescott's report, if the rate predicted by the EPA models proves to be accurate, by the end of this century, the sea level would rise two feet, and an additional three feet by the end of the 22nd century.

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"Tides are increasing in height," warned Jerry Phillips, director of the Florida division of PEER. "If we don't do something soon, parts of Florida are going to end up like Atlantis," the island of Greek legend that was submerged by an earthquake.

Not all scientists agree with Trescott's predictions.

"Those numbers (from Trescott's SFS briefing) are somewhat speculative at the present rate of rises," said Bob Weisberg, a 30-year professor of physical oceanography at the University of South Florida's St. Petersburg campus.

"But if such things as global warming and the melting of the icecaps start going at a faster rate than what is now happening, those numbers are within the realm of possibility. But those numbers just aren't present in the current (sea level) data base," he added.

Estimates by the Center for Coastal Ecology at Mote Marine Laboratory place the current rate of sea level rise in the Florida region at two millimeters a year, but some scientists and environmentalists say this would almost certainly accelerate due to global warming.

Administrators for the U.S. Corps of Engineers and the Florida Department of Environmental Protection (FDEP) were invited to the Southwest Florida Symposium, where the data from Mote was also presented.

"The Corps of Engineers had a Jacksonville (Florida) attorney representing them in the afternoon of the second day of the conference but the Corps of Engineers had no employees there for most of the weekend conference," Trescott said.

The federal agency did not respond to inquiries to verify Trescott's claim.

Anthony De Luise, spokesman for the Florida Department of Environmental Protection, told IPS that, "The (EPA) report is being reviewed by people here at the DEP, but I'm not sure when we will have a comment on it. We're aware of (construction) growth and the implications of development."

The subject of rising sea levels is very complex and involves numerous fields, Weisberg explained, including chemistry, geology and physics. "The average person has to understand that the physical sciences are constantly changing and that the level of the sea is going to ebb and flow even without global warming," he said.

Sea levels between different areas on Earth vary, sometimes in numbers that are noteworthy to scientists. For example, the sea levels of Nova Scotia and Florida can differ by as much as 16 inches.

These variances are related to a number of factors. James G. Titus and Vijay Narayanan, the two authors of the EPA report, mention some, including the concentration of greenhouse gases; climate change-related temperature increases and thermal expansion; and changes in polar precipitation and in the Arctic, Antarctic and Greenland Ice Sheets.

"The Probability of Sea Level Rise" includes a graph titled "Historic Greenhouse Contribution to Sea Level, 1880-1990," which shows a massive increase in greenhouse gases like carbon dioxide since the Industrial Revolution.

It notes that the Earth's average surface temperature has risen approximately 0.6 degrees Celsius in the last century, and the nine warmest years have all occurred since 1980.

"Stabilizing emissions by the year 2025 could cut the rate of sea level rise in half," the authors add. "[But] if a high global rate of emissions growth occurs in the next century, sea level is likely to rise 6.2 mm/yr by 2100."

Their report was written during the Bill Clinton administration. Since then, President George W. Bush has abandoned the Kyoto Protocol, an international treaty to curb industrialized countries' greenhouse gas emissions by 5.2 percent below 1990 levels by 2008-12.

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Meanwhile, another study released last week in the journal Science found that the Greenland Ice Sheet, Earth's second-largest reservoir of fresh water, is melting at three times the rate of the previous five years.

And the impacts of rising sea levels are already being felt in South Pacific islands like Tonga and Tuvalu, which have reported sea level rises of 10 centimeters in just the past dozen years, according to the South Pacific Sea Level and Climate Monitoring Project.

In Fiji, a group of Pacific islands comprising 18,250 square kilometers, sea level has risen by eight centimeters and is predicted to be at least another 30 centimeters higher by 2050.

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